

# Fact Sheet



## For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on December 9, 2008.

Permit Number: **R30-06100027-2008**

Application Received: **January 20, 2009**

Plant Identification Number: **03-054-061-00027**

Permittee: **Morgantown Energy Associates**

Mailing Address: **555 Beechurst Avenue, Morgantown, West Virginia 26505**

Permit Action Number: *MM01*

Revised: *April 2, 2009*

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Physical Location:	Morgantown, Monongalia County, West Virginia
UTM Coordinates:	589.20 km Easting • 4,388.10 km Northing • Zone 17
Directions:	From Charleston take Interstate 79 North to Exit 152. Bear right onto on Fairmont Rd (US-19) approximately 1.9 miles. Turn right onto Holland Ave. (US-19) approximately 1.4 miles to University Avenue. Turn left on Beechurst Ave. Facility is located on the Left approximately 0.8 miles.

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### Facility Description

The Morgantown Energy Facility is a fossil fuel fired cogeneration facility and operates under SIC code 4911. The facility consists of two (2) 375 MMBtu/hr waste coal and coal fired circulating fluidized bed (CFB) boilers and related facilities, including a steam transmission line and two (2) 132 MMBtu/hr auxiliary natural gas-fired boilers. Each CFB boiler is rated at 280,000 lb/hr of steam at 1500-psi and 950°F, and is capable of 294 KPPH. Gross generation is normally 57 to 59 MW, with an export of 50 MW to the grid. Thus, 7 to 9 MW of generation is internally used. Combined operation of the CFB and auxiliary boilers occurs occasionally. Typically, combined operation occurs when one CFB boiler is taken off-line for maintenance causing one or both auxiliary boilers to be brought on-line. Combined operation may also occur during periods of high steam demand from West Virginia University. When this occurs, combined operation consists of both CFBs being on-line as well as one or both auxiliary boilers. It is also occasionally necessary to take both CFBs off-line. The auxiliary boilers are brought on-line in this situation to meet the steam demand for West Virginia University. Other supporting operations include coal

handling, limestone handling, and ash handling, as well as various tanks with insignificant emissions. The facility has the potential to operate seven (7) days per week, twenty-four (24) hours per day and fifty-two (52) weeks per year.

### Emissions Summary

There are no emissions changes due to this permitting action.

### Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 558 tpy of CO; 1,314 tpy of NO<sub>x</sub>; 106.1 tpy of particulate matter; 1,248 SO<sub>2</sub>; and 40.0 tpy of hydrochloric acid. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Morgantown Energy Associates is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State: 45CSR30 Operating permit requirement.

State Only: None

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

## Determinations and Justifications

The permittee requested the following changes in the Title V permit:

- A. Clarify the language in the definition of excursion for CAM purposes in condition 4.2.10.
- B. Update the test method for mercury in condition 4.3.9. The current reference cites “40 CFR 75 Appendix K, Method 30b”. The correct reference should be “40 CFR 60 Appendix A, Method 30b”.

The determinations concerning these requested changes are set forth below.

1. **40 C.F.R. Part 64 – Compliance Assurance Monitoring (CAM).** The permittee included a CAM plan in the renewal application for the two CFB boilers (S009J, S009K). Subsequent discussions with the permittee while writing the renewal permit yielded revisions to the CAM plan originally submitted in the application. The following language was included in the GENERAL CRITERIA Indicator Range in Table 1 of the final Fact Sheet (p.8 of 15) for the renewal permit.

For CAM purposes, normal operation shall be between 0% - 6% opacity on a six minute block basis. Opacity greater than 6% (six minute block) triggers supplementary actions (4.2.9.). An *excursion* is defined as one six-minute period greater than 8% opacity after supplementary action is taken (4.2.10.). Excursions trigger an inspection, evaluation, corrective action (4.4.3.), recordkeeping (4.4.4.), and a reporting requirement (4.5.6.). Note: The opacity limit for the facility is 10% on a six minute block basis, and the 6% and 8% opacity thresholds are for CAM purposes only.

The following language was part of the discussion in the final Fact Sheet (p.10 of 15) for the renewal permit.

This writer and the permittee agreed that it would not be prudent to wait until 10% opacity is reached before triggering an excursion and then take corrective action. Therefore, the permittee has proposed to be proactive when opacity rises to a level greater than historical data indicate is normal operation. In particular, the permittee has proposed to initiate a baghouse cleaning cycle if opacity is greater than 6% (six-minute block). During this cleaning cycle, the problem (e.g., compartment) will be identified, isolated, and appropriate corrective measures taken. These actions initiated at the 6% opacity trigger level are considered by the permittee to be “supplementary actions,” and are set forth as permit condition 4.2.9. The permittee noted that the opacity will increase when the problematic compartment goes through the cleaning cycle. Therefore, the opacity will continue to be monitored during cleaning. If *during* this supplementary action cleaning cycle the opacity exceeds 8%, it shall not be considered an excursion for CAM. However, if *after* the cleaning cycle is complete and the system has been returned to normal operation, a subsequent opacity exceeding 8% will be an excursion. Also, if the opacity rises at a rate so fast that the permittee does not have time to react and manually initiate the cleaning cycle, and opacity exceeds 8%, then this will still be an excursion in spite of the fact that there was not enough time to perform supplementary actions. The permittee has proposed that an *excursion* be defined as one six-minute period in which opacity is greater than 8% opacity after supplementary actions have been taken. Refer to condition 4.2.10.

The preceding Fact Sheet discussion accounts for possible scenarios before, during, and after supplementary actions are performed. The discussion also accounts for the possibility that supplementary actions could not be performed.

The permittee has requested to revise permit condition 4.2.10. to read as follows:

**Excursions** – An excursion shall be defined as opacity greater than eight (8) percent during any six-minute period during any one-hour period after supplementary action (as defined in Condition 4.2.9.) has been taken. Refer to conditions 4.4.3., 4.4.4., and 4.5.6. for recordkeeping and reporting requirements for excursions.

[40 C.F.R. § 64.6(c)(2); 45CSR§30-5.1.c.]

However, based upon the final Fact Sheet discussion above, condition 4.2.10. will be revised to read as follows:

**Excursions** – An excursion shall be defined as opacity greater than eight (8) percent during any six-minute period during any one-hour period after supplementary action (as defined in condition 4.2.9.) has been taken. An excursion will not be deemed to have occurred if the opacity exceeds 8% during the cleaning cycle specified in condition 4.2.9.a. If the opacity exceeds 8% before the permittee has time to perform the supplementary actions in condition 4.2.9., an excursion will be deemed to have occurred. Refer to conditions 4.4.3., 4.4.4., and 4.5.6. for recordkeeping and reporting requirements for excursions.

[40 C.F.R. § 64.6(c)(2); 45CSR§30-5.1.c.]

In summary, performing the supplementary actions should provide a clean, properly functioning baghouse, that will reduce the opacity below 6%. It is therefore reasonable that exceeding 8% opacity after this supplementary action is performed would be an excursion. It is also reasonable to allow the opacity to increase above 8% during the cleaning cycle since the PM mass is being released during this cycle (although it is not acceptable to exceed the 10% opacity and PM mass limits of permit conditions 4.1.1. and 4.1.7., respectively). Another scenario considered in the revised condition is that it may be possible that the opacity begins to increase at a rate so fast that it exceeds 8% before the permittee has time to react and complete the supplementary actions. It seems reasonable that this scenario would still be an excursion, despite the fact that the permittee did not perform the supplementary actions.

## 2. Mercury Test Method

Condition 4.3.9. incorporates “40 C.F.R. Part 75, Appendix K, Method 30.b.” for demonstrating compliance with mercury emission limits. Sub-section 1.2. of Appendix K gives applicability criteria for this method, which states, “These performance criteria and procedures are applicable to monitoring of vapor-phase Hg emissions under relatively low-dust conditions ( *i.e.* , sampling in the stack after all pollution control devices), from coal-fired electric utility steam generators which are subject to subpart I of this part.” The permittee’s CFB boilers are not subject to 40 C.F.R. Part 75, Subpart I – *Mercury Mass Emission Provisions*. Therefore, this method is not applicable.

The correct reference should be “40 C.F.R. Part 60, Appendix A, Method 30B - *Determination of Total Vapor Phase Mercury Emissions From Coal-Fired Combustion Sources Using Carbon Sorbent Traps*”. Condition 4.3.9. has been revised to include this correct test method.

## Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

None.

## Request for Variances or Alternatives

None.

## Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

### **Comment Period**

Beginning Date: Not applicable for minor modifications.  
Ending Date: Not applicable for minor modifications.

All written comments should be addressed to the following individual and office:

Denton B. McDerment  
Title V Permit Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, S.E.  
Charleston, WV 25304

### **Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

### **Point of Contact**

Denton B. McDerment  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1221 • Fax: 304/926-0478

### **Response to Comments (Statement of Basis)**

U.S. EPA had no comment on this minor modification according to e-mail correspondence received from Amy Caprio on March 24, 2009.